SECTION OB

MAINTENANCE AND LUBRICATION

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SCHEDULED MAINTENANCE SERVICES INTRODUCTION **HOW THIS SECTION IS ORGANIZED**

This section covers the maintenance required for these vehicles. These services are required to retain safety, dependability and emission control performance.

Important

Keep engine oil at proper level and change as recommended.

THESE VEHICLES AND THE **ENVIRONMENT**

Proper vehicle maintenance not only keeps the vehicle in good working condition, but also helps the environment, all recommended maintenance procedures are important. Improper vehicle maintenance or the removal of important components can significantly effect the quality of the air we breathe. Improper fluid levels or even the wrong tire inflation can increase the level of emissions from these vehicles. To help protect the environment, and to help the vehicle in good condition, perform all recommended maintenance.

The remainder of this section is divided into five

"Part A: Scheduled Maintenance Services" shows what services to have done and how often. Some of these services can be complex, and require a trained technician to perform.

CAUTION: Performing maintenance work on a vehicle can be dangerous. Attempting repairs or service without the appropriate training, tools, and equipment could cause injury to you or others and damage to the vehicle that may cause it not to operate properly.

"Part B: Owner Checks and Services" tells what should be checked when stopping for fuel. It also explains what can be done easily to help keep these vehicles in good condition.

'Part C: Periodic Maintenance Inspections" explains important inspections that a

trained technician should perform.

"Part D: Recommended Fluids and Lubricants" lists some products GM recommends to help keep these vehicles properly maintained. Use these products, or their equivalents, whenever performing maintenance services.

PART A: SCHEDULED MAINTENANCE SERVICES

USING THE MAINTENANCE SCHEDULE

GM wants to help keep these vehicles in good working condition. Because of all the different ways people use their GM vehicles, maintenance needs vary. More frequent checks and replacement than you'll find in the schedules in this section may be needed. Read this section, and keep in mind the customer's driving habits.

The proper fluids and lubricants to use are listed in Part D. Use the proper fluids and lubricants whenever servicing these vehicles.

The schedules are for vehicles that:

- To carry passengers and cargo within the limitations indicated on the tire placard located on the edge of the driver's door lock pillar.
- On reasonable road surfaces within legal operating limits,
- On unleaded gasoline.

SELECTING THE RIGHT SCHEDULE

SHORT TRIP/CITY MAINTENANCE SCHEDULE DEFINITION

Follow Short Trip/City Maintenance Schedule if the vehicle is operated under one or more of the following conditions:

- When most trips are less than 5 to 10 miles (8 to 16 km). This is particularly important when outside temperatures are below freezing.
- When most trips include extended idling and/or frequent low-speed operation as in stop-and-go traffic.
- Towing a trailer.
- · Operating in dusty areas.

Short Trip/City Maintenance Schedule should also be followed if the vehicle is used in delivery service, police, taxi or other commercial applications.

Short Trip/City Maintenance Schedule Intervals

Every 3,000 Miles (5 000 km):

Engine Oil and Filter Change (or 3 months, whichever occurs first)

Free-Wheeling Hubs Inspection (if equipped) (or 3 months, whichever occurs first)

Every 6,000 Miles (10 000 km):

Tire Rotation

Every 15,000 Miles (25 000 km):

Air Cleaner Filter Inspection (in dusty conditions)

Front Wheel Bearing Repack (or at each brake relining, whichever occurs first)

Manual Transmission Fluid Change (or every 15 months, whichever occurs first)

Engine Idle Speed Check

Valve Lash (Clearance) Adjustment

Propeller Shafts and U-Joints Inspection (or every 15 months, whichever occurs first)

Every 30,000 Miles (50 000 km):

Air Cleaner Filter Replacement

Spark Plug Replacement

Engine Accessory Drive Belt Inspection (or every 24 months, whichever occurs first)

Cooling System Service (or every 30 months, whichever occurs first)

Fuel Filter Replacement (or every 30 months, whichever occurs first)

Every 50,000 Miles (83 000 km):

Automatic Transmission Service (under severe conditions)
Positive Crankcase Ventilation (PCV) Valve Replacement

Every 60,000 Miles (100 000 km):

Engine Timing and Distributor Check

Fuel Tank Cap Gasket Replacement

Emission System Hoses Inspection

Camshaft Timing Belt Replacement

Brake Fluid Service

Spark Plug Wire Replacement (or every 60 months, whichever occurs first)

Wiring Harness and Connectors Inspection (or every 60 months, whichever occurs first)

At 90,000 Miles (150 000 km):

Camshaft Timing Belt *nspection

Every 100,000 Miles (166 000 km):

Fuel Injector Inspection

Evaporative Emissions Canister Replacement

LONG TRIP/HIGHWAY MAINTENANCE SCHEDULE DEFINITION

Follow this maintenance schedule *only* if none of the conditions from the Short Trip/City Maintenance Schedule is true.

Driving a vehicle with a fully warmed engine under highway conditions causes engine oil to break down slower.

Long Trip/Highway Maintenance Schedule Intervals

Every 7,500 Miles (12 500 km):

Engine Oil and Filter Change (or every 7.5 months, whichever occurs first)

Free-Wheeling Hubs Inspection (if equipped) (or every 3 months, whichever occurs first)

Tire Rotation

Every 15,000 Miles (25 000 km):

Engine Idle Speed Check

Valve Lash (Clearance) Adjustment

Propeller Shafts and U-Joints Inspection (or every 15 months, whichever occurs first)

Every 30,000 Miles (50 000 km):

Engine Accessory Drive Belt Inspection (or every 24 months, whichever occurs first)

Cooling System Service (or every 30 months, whichever occurs first)

Spark Plug Replacement

Air Cleaner Filter Replacement

Fuel Tank, Cap and Lines Inspection

Manual Transmission Fluid Change (or every 30 months, whichever occurs first)

Fuel Filter Replacement (or every 30 months, whichever occurs first)

Every 50,000 Miles (83 000 km):

Automatic Transmission Service (under severe conditions)
Positive Crankcase Ventilation (PCV) Valve Replacement

Every 60,000 Miles (100 000 km);

Engine Timing and Distributor Check

Fuel Tank Cap Gasket Replacement

Emission System Hoses Inspection

Camshaft Timing Belt Replacement

Spark Plug Wire Replacement (or every 60 months, whichever occurs first)

Wiring Harness and Connectors Inspection (or every 60 months, whichever occurs first)

Brake Fluid Service

At 90,000 Miles (150 000 km):

Camshaft Timing Belt Inspection

Every 100,000 Miles (166 000 km):

Fuel Injector Inspection

Evaporative Emissions Canister Replacement

SHORT TRIP/CITY MAINTENANCE SCHEDULE

The services shown in this schedule up to 100,000 miles (166 000 km) should be performed after 100,000 miles (166 000 km) at the same intervals.

Footnotes

† The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of the vehicle's useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.

3,000 Miles (5 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

6,000 Miles (10 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

9,000 Miles (15 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

12,000 Miles (20 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

15,000 Miles (25 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect air cleaner filter (in dusty conditions).
 Replace filter if necessary. An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

18,000 Miles (30 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

21,000 Miles (35 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

24,000 Miles (40 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

27,000 Miles (45 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

30,000 Miles (50 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- · Replace spark plugs. An Emission Control Service.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks.
 Inspect fuel cap gasket for any damage. Replace parts as needed. An Emission Control Service.†
- · Rotate tires.
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Replace fuel filter (or every 30 months, whichever occurs first, or sooner if filter is clogged). An Emission Control Service.†
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

33,000 Miles (55 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

36,000 Miles (60 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

39,000 Miles (65 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

42,000 Miles (70 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

45,000 Miles (75 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect air cleaner filter (in dusty conditions).
 Replace filter if necessary. An Emission Control Service.
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

48,000 Miles (80 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

51,000 Miles (85 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

54,000 Miles (90 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

57,000 Miles (95 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

60,000 Miles (100 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- · Replace spark plugs. An Emission Control Service.
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- Replace spark plug wires (or every 60 months, whichever occurs first). An Emission Control Service.
- Replace the camshaft timing belt. Inspect belt after 30,000 miles (50 000 km). An Emission Control Service.
- Inspect the underhood wiring harness for loose connections, chafed wires and damage (or every 60 months, whichever occurs first). An Emission Control Service.
- · Drain, refill and bleed the brake system.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks.
 Inspect fuel cap gasket for any damage. Replace parts as needed. An Emission Control Service.†
- · Rotate tires.
- Replace fuel filter (or every 30 months, whichever occurs first). An Emission Control Service.†
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Adjust engine timing to underhood label specifications. Inspect the inside and outside of the distributor cap and rotor for cracks, carbon tracking and corrosion. Clean or replace as needed. An Emission Control Service.
- Inspect emission system hoses and replace as necessary. An Emission Control Service.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

54,000 Miles (90 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

57,000 Miles (95 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

60,000 Miles (100 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- · Replace spark plugs. An Emission Control Service.
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- Replace spark plug wires (or every 60 months, whichever occurs first). An Emission Control Service.
- Replace the camshaft timing belt. Inspect belt after 30,000 miles (50 000 km). An Emission Control Service.
- Inspect the underhood wiring harness for loose connections, chafed wires and damage (or every 60 months, whichever occurs first). An Emission Control Service.
- · Drain, refill and bleed the brake system.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks.
 Inspect fuel cap gasket for any damage. Replace parts as needed. An Emission Control Service.†
- · Rotate tires.
- Replace fuel filter (or every 30 months, whichever occurs first). An Emission Control Service.†
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Adjust engine timing to underhood label specifications. Inspect the inside and outside of the distributor cap and rotor for cracks, carbon tracking and corrosion. Clean or replace as needed. An Emission Control Service.
- Inspect emission system hoses and replace as necessary. An Emission Control Service.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

63,000 Miles (105 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

66,000 Miles (110 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

69,000 Miles (115 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

72,000 Miles (120 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

75,000 Miles (125 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect air cleaner filter (in dusty conditions).
 Replace filter if necessary. An Emission Control Service.
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

78,000 Miles (130 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

81,000 Miles (135 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

84,000 Miles (140 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

87.000 Miles (145 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

90,000 Miles (150 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Inspect camshaft timing belt. An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- · Replace spark plugs. An Emission Control Service.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks.
 Inspect fuel cap gasket for any damage. Replace parts as needed. An Emission Control Service.
- · Rotate tires.
- Change manual transmission fluid (or every 15 months, whichever occurs first).
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Replace fuel filter (or every 30 months, whichever occurs first, or sooner if filter is clogged). An Emission Control Service.†
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

93,000 Miles (155 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

96,000 Miles (160 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

99,000 Miles (165 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first). An Emission Control Service.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

100,000 Miles (166 000 km)

- Change automatic transmission fluid and filter (severe conditions).
- Replace Positive Crankcase Ventilation (PCV) valve.
 Replace any worn, plugged or collapsed hoses. An Emission Control Service.
- Inspect Exhaust Gas Recirculation (EGR) system.
 An Emission Control Service.
- Inspect fuel injector. An Emission Control Service.
- Replace evaporative emissions canister. An Emission Control Service.

LONG TRIP/HIGHWAY MAINTENANCE SCHEDULE

The services shown in this schedule up to 100,000 miles (166 000 km) should be performed after 100,000 miles (166 000 km) at the same intervals.

FOOTNOTES

† The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of vehicle useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.

7,500 Miles (12 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

15,000 Miles (25 000 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

22,500 Miles (37 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

30,000 Miles (50 000 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- · Rotate tires.
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- · Replace spark plugs. An Emission Control Service.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks.
 Inspect fuel cap gasket for any damage. Replace parts as needed. An Emission Control Service.
- Change manual transmission fluid (or every 30 months, whichever occurs first).
- Replace fuel filter (or every 30 months, whichever occurs first, or sooner if filter is clogged). An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

37,500 Miles (62 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

45,000 Miles (75 000 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

50,000 Miles (83 000 km)

- Change automatic transmission fluid and filter (severe conditions).
- Replace Positive Crankcase Ventilation (PCV) valve.
 Replace any worn, plugged or collapsed hoses. An Emission Control Service.

52,500 Miles (87 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

60,000 Miles (100 000 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Rotate tires.
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- Replace spark plugs. An Emission Control Service.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines and any hoses for damage.
- Replace fuel tank cap gasket. An Emission Control Service.
- Change manual transmission fluid (or every 30 months, whichever occurs first).
- Replace fuel filter (or every 30 months, whichever occurs first). An Emission Control Service.†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace as necessary.
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Adjust engine timing to underhood label specifications. Inspect the inside and outside of the distributor cap and rotor for cracks, carbon tracking and corrosion. Clean or replace as needed. An Emission Control Service.
- Inspect emission system hoses and replace as necessary. An Emission Control Service.
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.
- Inspect the underhood wiring harness for loose connections, chafed wires and damage (or every 60 months, whichever occurs first). An Emission Control Service.
- Replace the camshaft timing belt. Inspect belt after 30,000 miles (50 000 km). An Emission Control Service
- Replace spark plug wires (or every 60 months, whichever occurs first). An Emission Control Service.
- · Drain, refill and bleed the brake system.

67,500 Miles (112 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

75,000 Miles (125 000 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.

82,500 Miles (137 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

90,000 Miles (150 000 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect engine accessory drive belts (or every 24 months, whichever occurs first). An Emission Control Service.
- Inspect camshaft timing belt. An Emission Control Service.
- Drain, flush and refill cooling system (or every 30 months, whichever occurs first). Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. An Emission Control Service.
- · Replace spark plugs. An Emission Control Service.
- Replace air cleaner filter. An Emission Control Service.
- Inspect fuel tank, cap and lines and any hoses for damage. Replace fuel tank cap gasket. An Emission Control Service.
- Change manual transmission fluid (or every 30 months, whichever occurs first).
- Replace fuel filter (or every 30 months, whichever occurs first, or sooner if filter is clogged). An Emission Control Service,†
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.
- Inspect the valve lash and adjust if necessary. An Emission Control Service.
- Check engine idle speed and adjust it to underhood label specifications. An Emission Control Service.†
- Inspect propeller shafts and U-joints for looseness and damage (or every 15 months, whichever occurs first). Inspect more frequently if used off-road or for pulling a trailer. Tighten U-joint flange bolts if necessary.
- · Rotate tires.

97,500 Miles (162 500 km)

- Change engine oil and filter (or every 7.5 months, whichever occurs first). An Emission Control Service.
- · Rotate tires.
- Inspect the locking front hubs (if equipped) for correct operation (or every 3 months, whichever occurs first). Repair or replace if necessary.

100,000 Miles (166 000 km)

- Change automatic transmission fluid and filter (severe conditions).
- Replace Positive Crankcase Ventilation (PCV) valve.
 Replace any worn, plugged or collapsed hoses. An Emission Control Service.
- Inspect Exhaust Gas Recirculation (EGR) system. An Emission Control Service.
- · Inspect fuel injector. An Emission Control Service.
- Replace evaporative emissions canister. An Emission Control Service.

PART B: OWNER CHECKS AND SERVICES

Listed below are checks and services that should be performed at the intervals specified to help ensure the safety, dependability and emission control performance of the vehicle.

Make sure any necessary repairs are completed on time. Whenever any fluids or lubricants are added to the vehicle, make sure they are the proper ones, as shown in Part D.

At Each Fuel Fill

It is important to perform these underhood checks at each fuel fill.

Engine Oil Level

Check the engine oil level and add the proper oil if necessary. Refer to SECTION 6A.

Engine Coolant Level

Check the engine coolant level and add the proper coolant mixture if necessary. Refer to SECTION 6B.

Windshield Washer Fluid Level

Check the windshield washer fluid level in the windshield washer reservoir and add the proper fluid if necessary. Refer to SECTION 8E.

Hood Latch Operation Check

Pull the primary hood latch release handle inside the vehicle. The secondary latch should keep the hood from opening all the way when the primary latch is released. Make sure the hood closes firmly.

At Least Once a Month

Cassette Deck Cleaning

Cleaning should be done every 50 hours of tape play.

Tire Inflation

Make sure tires are inflated to the pressures specified on the Tire-Loading Information label located on the driver's door lock pillar.

At Least Twice a Year

Restraint System Check

Make sure the safety belt reminder light and all your belts, buckles, latch plates, retractors and anchorages are working properly. Look for any other loose or damaged safety belt system parts. If you see anything that might keep a safety belt system from doing its job, have it repaired. Have any torn or frayed safety belts replaced.

Also look for any opened or broken air bag covers, and have them repaired or replaced. (The air bag system does not need regular maintenance.)

Fluid Level Check

Check the transfer case, axle differential(s) and automatic or manual transmission fluid levels and add as needed. A fluid loss in these systems could indicate a problem.

Automatic Transmission Check

Check the transmission fluid level; add if needed. A fluid loss may indicate a problem.

At Least Once a Year

Key Lock Cylinders Service

Lubricate the key lock cylinders with Multi-Purpose Lubricant, Superlube® GM Part No. 12346241, or equivalent.

Body Lubrication Service

Lubricate all body door hinges. Also lubricate all hinges and latches, including those for the hood, rear compartment, glove box door, console door and any folding seat hardware. Part D tells you what to use. More frequent lubrication may be required when exposed to a corrosive environment.

Starter Switch Check

CAUTION: When you are doing this check, the vehicle could move suddenly. If it does, you or others could be injured. Follow the steps below.

- 1. Before you start, be sure you have enough room around the vehicle.
- 2. Firmly apply both the parking brake and the regular brake.

NOTE: Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.

3. On automatic transmission vehicles, try to start the engine in each gear. The starter should work only in PARK (P) or NEUTRAL (N). On manual transmission vehicles, put the shift lever in NEUTRAL (N), push the clutch down halfway and try to start the engine. The starter should work only when the clutch is pushed down all the way to the floor.

Brake-Transmission Shift Interlock (BTSI) Check (Automatic Transmission)

CAUTION: When you are doing this check, the vehicle could move suddenly. If it does, you or others could be injured. Follow the steps below.

- 1. Before you start, be sure you have enough room around the vehicle. It should be parked on a level surface.
- 2. Firmly apply the parking brake.

NOTE: Be ready to apply the regular brake immediately if the vehicle begins to move.

With the engine off, turn the key to the ON position, but don't start the engine. Without applying the regular brake, try to move the shift lever out of PARK (P) with normal effort. If the shift lever moves out of PARK (P), the BTSI needs service.

Steering Column Lock Check

- 1. On automatic transmission equipped vehicles, while parked, and with the parking brake set, try to turn the key to LOCK in each shift lever position. The key should turn to LOCK only when the shift lever is in PARK (P).
- 2. The key should come out only in LOCK.

Parking Brake and Automatic Transmission PARK (P) Mechanism Check

CAUTION: When you are doing this check, your vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of your vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake: With the engine running and transmission in NEUTRAL (N), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the PARK (P) mechanism's holding ability: Shift to PARK (P). Then release all brakes. If your vehicle is four-wheel drive, be sure the transfer case is not in NEUTRAL (N).

Underbody Flushing Service

At least every spring, use plain water to flush any corrosive materials from the underbody. Take care to clean thoroughly any areas where mud and other debris can collect.

PART C: PERIODIC MAINTENANCE INSPECTIONS

Listed below are inspections and services that should be performed at least each time the engine oil is changed. Make sure any necessary repairs are completed at once.

Steering, Suspension and Front Drive Axle Boot and Seal Inspection

Inspect the front and rear suspension and steering system for damaged, loose or missing parts, signs of wear, or lack of lubrication. Inspect the power steering lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Clean and then inspect the drive axle boot seals for damage, tears or leakage. Replace seals if necessary.

Exhaust System Inspection

Inspect the complete exhaust system. Inspect the body near the exhaust system. Look for broken, damaged, missing or out-of-position parts as well as open seams, holes, loose connections, or other conditions which could cause a heat build-up in the floor pan or could let exhaust fumes into the vehicle.

Radiator and Heater Hose Inspection

Inspect the hoses and have them replaced if they are cracked, swollen or deteriorated. Inspect all pipes, fittings and clamps; replace as needed.

Throttle Linkage Inspection

Throttle system (includes accelerator and cruise control) should operate freely without hesitation between full, closed and wide open throttle. Throttle system component causing hesitation or sticking should be replaced. Inspect for the following:

- 1. Missing parts such as retainers or clips.
- Interference of linkage or cable conduit to critical components such as fuel lines, brake pipes, harness leads, etc.
- Proximity of cable to exhaust system and other heat sources; check for melting and/or discoloration.
- Cable kinking, maintain generous blend radii of cables.
- Clearance of throttle system moving parts throughout their travel from other stationary components.
- 6. Damage of components due to cable kinking, severe abrasion, mis-alignment, etc.

NOTICE: Accelerator and cruise control cables should not be lubricated. Lubrication destroys the protective coating on the cables.

Rear Axle (All) and Front Axle (Four-Wheel Drive) Service

Check the gear lubricant level and add if needed. A fluid loss may indicate a problem. Check the system(s), and repair the system(s) if needed. Refer to "Scheduled Maintenance Services" earlier in this section, to determine when to change the lubricant.

Brake System Inspection

Inspect the complete system. Inspect brake lines and hoses for proper hookup, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors for surface condition. Also inspect drum brake linings for wear and cracks. Inspect other brake parts, including drums, wheel cylinders, calipers, parking brake, etc. Check parking brake adjustment. A good time to check the brakes is when the wheels are removed for tire rotation. Brakes may need to be inspected more often if driving habits or conditions result in frequent braking.

Clutch System Service

Check clutch pedal free travel and adjust as necessary.

PART D: RECOMMENDED FLUIDS AND LUBRICANTS

NOTE: Fluids and lubricants identified below by name, part number or specification may be obtained from your GM dealer.

ENGINE OIL AND OIL FILTER CHANGE

? Important

Use only engine oil with the American Petroleum Institute Certified For Gasoline Engines "Starburst" symbol. Failure to use the proper oil can result in engine damage (Figure 1).

Engine Oil Filter

Important

To prevent leakage of all oil filters, etc., it is very important to follow the installation instructions listed below.

A. Remove old filter by turning counterclockwise. Clean the gasket sealing area on the engine oil filter mounting surface.

- B. Lightly oil the oil filter gasket with clean oil and install filter. After the oil filter gasket contacts the oil filter mounting surface, tighten 3/4 to 1 full turn. When necessary, use a cap-type wrench, strap-type wrench with handle, or equivalent to ensure proper installation.
- C. With engine oil at proper level, run engine three minutes and thoroughly check filter area for leaks.

Engine Oil Viscosity

Figure 1

Engine oil viscosity (thickness) has an effect on fuel economy and cold-weather operation (starting and oil flow). Lower viscosity engine oils can provide better fuel economy and cold-weather performance; however, higher temperature weather conditions require higher viscosity engine oils for satisfactory lubrication.

NOTICE: Using oils of any viscosity other than those viscosity's recommended could result in engine damage.

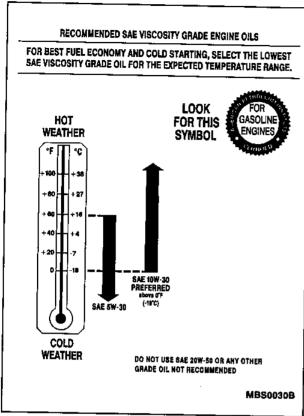


Figure 1—Engine Oil Viscosity Recommendation

When choosing an oil, consider the range temperature the vehicle will be operated in before the next oil change. Then, select the recommended oil viscosity from the "Recommended SAE Viscosity Grade Engine Oils" chart (Figure 1).

AUTOMATIC TRANSMISSION FLUID AND FILTER CHANGE

If the vehicle is mainly driven under one or more of these conditions:

- 1. In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
- 2. In hilly or mountainous terrain.
- 3. When doing frequent trailer towing.
- 4. Uses such as found in taxi, police car or delivery service.

Change the fluid and filter every 50,000 miles (83 000 km).

If the vehicle is not used mainly under any of these conditions, the fluid and filter do not require periodic changing.

MAINTENANCE RECORD

After the scheduled services are performed, record the date, odometer reading and who performed the service in the Owner's Manual after the maintenance interval.

RECOMMENDED FLUIDS AND LUBRICANTS

USAGE	FLUID/LUBRICANT
Automatic Transmission	DEXRON-III®Automatic Transmission Fluid.
Chassis Lubrication	Chassis lubricant, GM Part No. 1052497 or equivalent, or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB.
Clutch Linkage Pivot Points	Lithium base grease.
Engine Coolant	50/50 mixture of water (preferably distilled) and ethylene glycol base antifreeze conforming to GM Specification 1825M, GM P/N 1052753, or approved recycled coolant conforming to GM Specification 1825M.
Engine Oil	Engine oil with the American Petroleum Institute Certified For Gasoline Engines "Starburst" symbol of the proper viscosity. To determine the preferred viscosity for your vehicle's engine, refer to Figure 1.
Floor Shift Linkage	Lubriplate Lubricant aerosol, GM Part No. 12346293 or equivalent, or lubricant meeting requirements of NLGI Grade 2 Category LB or GC-LB.
Front and Rear Axle Housing	80W90 GL5 Lubricant GM Part No. 12345977, or equivalent.
Fuel Door Hinge, Hood and Door Hinges and Rear Door Hinges	Lubriplate Lubricant aerosol, GM Part No. 12346293 or equivalent, or lubricant meeting requirements of NLGI Grade 2 Category LB or GC-LB.
Hood Latch Assembly Pivots, Spring Anchor and Release Pawl	Lubriplate Lubricant aerosol, GM Part No. 12346293 or equivalent, or lubricant meeting requirements of NLGI Grade 2 Category LB or GC-LB.
Hood Latch Assembly Release Pawl	Chassis lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB, GM Part No. 1052497, or equivalent.
Hydraulic Brake System	Delco Supreme 11® Brake fluid GM Part No. 1052535, or equivalent, DOT-3 brake fluid.
Key Lock Cylinders (except instrument panel compartment lock)	Multi-Purpose Lubricant, Superlube® GM Part No. 12346241, or equivalent.
Manual Transmission and Transfer Case (4WD)	SAE 75W85 GL4 Synthetic Lubricant GM Part No. 12346190, or equivalent.
Manual Transmission Shift Linkage	Chassis Lubricant GM Part No. 1052497, or equivalent; or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB.
Parking Brake Cable Guides, Underhood Contact Points	Chassis lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB, GM P/N 1052497, or equivalent.
Power Steering System	DEXRON-III® Automatic Transmission Fluid.
Weathertrips Conditioning	Dielectric Silicone Grease GM Part No. 12345579, or equivalent.
Wheel Bearings	Wheel bearing lubricant GM Part No. 1051344, or equivalent.
Windshield Washer Solvent	GM "Optikleen"® washer solvent GM Part No. 1051515, or equivalent.

MAINTENANCE ITEMS

Air Cleaner (ACL) Filter Engine Oil Filter Positive Crankcase Ventilation (PCV) Valve	
Spark Plugs and Gap	
AC Type	R43XLS 0.7 to 0.8 mm (0.028 to 0.032 in.)
NGK Type	
Nippondenso Type	BPR5ES 0.7 to 0.8 mm (0.028 to 0.032 in.)
APPROXIMATE FLUID CAPACITIES	
Air Conditioning R-134a	
Engine Crankcase:	
With Filter Change	4.2 liters (4.5 qt.) 4.0 liters (4.2 qt.)
Without Filter Change	
Engine Coolant Level (ECL)	1/

MAINTENANCE AND LUBRICATION 0B-17

Manual Transmission Fuel Tank Transmission:	5.3 liters (5.6 at)
Fuel Tank	42.0 liters (11 ~ol)
	42.0 meis (11 gal.)
3-Speed Automatic (RPO M65):	
Drain and Refill	2.9. litama (2.04.)
Overhaul	5.1 Here (5.2 -1)
Drain and Refill	2.5.14 (2.64.4)
Overhaul	2.3 liters (2.64 qt.)
Manual:	0.9 mers (7.3 qt.)
Two-Wheel Drive	17 14 (10
Four-Wheel Drive Transfer Case	
Transfer Case	
Front Axle Housing	1./ liters (1.8 qt.)
Rear Axle Housing	1.0 liters (1.1 qt)
	2.2 liters (2.3 qt.)
AD HIGHER BEIT TOWARD OF	
ADJUSTABLE BELT TENSION SPECIFIC	ATIONS
A PDI 1C ATION	
APPLICATION DE	FLECTION / FORCE EXERTED
coolding a minute of the contract of the contr	20 to 0.27 in 1 / 10 fz = /22 fb. 1
A/C Compressor	.24 to 0.35 in.) / 10 Kg (22 lbs.)
Power Steering Pump	.24 to 0.35 in.) / 10 Kg (22 lbs.)
TIRE PRESSURE SPECIFICATIONS	
THE THEODOILE GREGIFICATIONS	
D206/75D1#	
P205/75R15	160 kPa (23 psi)
I IJD: /JRIJ	160 LDa (22 Pai)
Spare	160 kPa (23 psi)